REMARKS/ARGUMENTS

Discussion of the Rejections of the Independent Claims

In paragraph 5 of the Office action, independent claims 1, 17, 33, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sklarew (U.S. 5,297,216) in combination with Allen (U.S. 5,214,428) and further in combination with Bera (U.S. 6,754,387). The rejection is respectfully traversed.

Sklarew is cited for the base teaching of a character recognition method which allows the translation of any written character or symbol into computer text. The examiner notes that Sklarew "does not teach that the template is a physical template constraining an input device." The examiner cites Allen as disclosing a physical template constraining an input device. The portion of Allen cited by the examiner recognizes that the input device of Allen consists of a grid of grooves in which the stylus travels to input data to the computer. Col. 2, lines 24 and 25. The grooves define pathways, and the motion along the pathways is significant. As disclosed in Allen, Col. 8, lines 39-58:

> An exemplary copyrighted alphabet is shown in FIG. 9 in which only two strokes are required to input each letter. These stroke combinations can be in either direction as shown, for example, for the letter "A" in which the first stroke segment may be the diagonal 94 with a downward vertical stroke 98 as the second stroke or may begin with an upward vertical stroke 98 and then a downward diagonal stroke 94. The exemplary alphabet provides a two-stroke combination for all of the letters of the Roman alphabet, many of which are quite similar to the actual letter which it represents. This similarity aids in a quicker learning curve for a user learning this alphabet code. Furthermore, each of the letter symbols may be input in either of two directions. Several letters are represented by the second stroke returning over the first stoke to the starting node, such as the "E", "H", or "I". A key to the present alphabet may be printed as an aid on the lower section 24 of the base housing 12, so that users may quickly refresh their memory during use of the present apparatus.

This passage from Allen demonstrates that the path comprising the stroke is necessary to the interpretation of the letter. Independent claims 1, 17, and 38 have been amended to recite that the character (claims 1 and 38) and the letter (claim 17) are identified based on the sequence of corner hits independently of the path therebetween. Claim 33 has been amended to recite that

the sequence of corner hits, from which the character is determined, is determined independently of the path therebetween. Support for that amendment may be found, inter alia, in paragraph [0031] of the application as filed. The combination of Sklarew and Bera does not render obvious the invention as set forth in independent claims 1, 17, 33, and 38.

On page 5 of the Office action, the examiner recognizes that Sklarew "does not specifically teach using a sequence of corner hits and identifying a symbol based on that sequence." The examiner cites column 1, line 34 of Bera as supplying the missing teachings. Bera, however, is referring to a different type of corner. Independent claims 1, 33, and 38 have been amended to recite that each corner hit in the sequence of corner hits corresponds to a corner defined by the template. See, for example, paragraphs [0027] and [0030] of the application as filed. In Bera, "corners" refers to those positions in a coordinate system where the lines forming a polygon pattern intersect. In Bera, there is no physical template constraining an input device which provides "corners" that a user may hit to create a "sequence of corner hits." For the foregoing reasons, it is believed that independent claims 1, 33, and 38 are patentable over the art of record.

Regarding claim 17, claim 17 also recites "identifying said letter character as being upper case when said unistroke ends in a common predetermined corner and lower case when said unistroke does not end in the common predetermined corner." The examiner has cited Sano in a discussion of independent claim 56 as teaching ending in a common corner to identify the letter as being upper case. Applicants respectfully disagree with the examiner's position.

It is the examiner's position that Sano "does teach identifying a letter character as being upper case when said stroke representative of said character ends in a common predetermined corner and lower case when said stroke does not end in said common predetermined corner." However, Sano does nothing like that. Nowhere in Sano is the word "corner" even mentioned. Rather, Sano teaches making a dot over an on-screen keyboard key for lower case (Col. 3, lines 42-58), and making a circle on top of an on-screen keyboard key for upper case (Col. 3, line 59-Col. 4, line 3). The dots and circles of Sano can be made anywhere over the key. Combining Sano with Sklarew, Allen and Bera would *not* result in anything like the subject matter of claim 17 or claim 56. Furthermore, it is not clear how the teachings of using dots and circles of Sano

could even be combined with, for example, the teaching of Sklarew's gridded input device. Claim 17 is believed to be unobvious over the cited combination of references, with or without Sano.

In paragraph 6 of the Office action, independent claim 56 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sklarew (U.S. 5,297,216) in combination with Allen (U.S. 5,214,428) and further in combination with Bera (U.S. 6,754,387) and Sano (U.S. 5,832,113). This combination of references is discussed above with respect to claim 17, and the arguments presented in conjunction with claim 17 are equally applicable to claim 56.

In paragraph 9 of the Office action, independent claims 1, 17, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. (U.S. 5,303,312) in combination with Zadesky et al. (U.S. 2003/0076306). This rejection is respectfully traversed.

It is the examiner's position that Comerford et al. teaches "identifying a character based on said sequence of corner hits." That statement is incorrect. Comerford et al. identifies the characters by the set of *edges* that are drawn. There is no mention of corners in Comerford et al. The examiner says that "the information presented by edges can be equivalently shown by a sequence of nodes or corners of the resulting graph." Even with that assumption, the *order* of the edges is *ignored* by Comerford et al., and thus the order or sequence of edges is not used, only the list of which edges are drawn. That is apparent from Fig. 5 where the stroke is drawn 3, 13, 17, 9, 10, 11 but the encoding at 36 is in numerical order. Thus, the recognition method of Comerford et al. does not teach that which the Office has argued and is, in fact, significantly different from the method set forth in claims 1, 17, and 38.

The examiner states that Zadesky et al. "does teach a physical template constraining an input device." Of course every touch pad has an "outer perimeter [which] . . . defines the working boundary of the touch pad" but that does not teach that a recognition method should take advantage of that boundary. Combining the teachings of Comerford et al. and Zadesky et al. does not result in a recognition method that identifies a character based on a sequence of corner hits independently of the path therebetween, and wherein each corner hit in the sequence of corner hits corresponds to a corner defined by the template.

In paragraph 13 of the Office action, claim 56 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. and Zadesky et al. in combination with Sano (U.S. 5,832,113). It is respectfully submitted that the shortcomings of Comerford et al. and Zadesky et al. are set forth above. The addition of Sano does not overcome those deficiencies. Furthermore, it is the examiner's position that Sano "does teach identifying a letter character as being uppercase [*sic*] when said stroke representative of said character ends with a common predetermined corner and lowercase [*sic*] when said stroke does not end in said common predetermined corner." The examiner cites Sano, Col. 4, line 30, for this teaching. However, a more complete citation from Col. 4 indicates that the examiner's position is not correct. Sano, at Col. 4, lines 26-36, provides as follows:

> As shown in FIG. 6, it is assumed that the movements of the pen include a touch (.), a check (*v*), a circle (°), a triangle(Δ.). The movements determine whether the letter should be lowercase [*sic*], uppercase [*sic*], or marked with an umlaut.
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> For instance, as shown in FIG. 6, when the user touches the key representation "A" in a normal manner, the lowercase [*sic*] letter "a" is entered; when the user checks the same portion, the uppercase [*sic*] letter "A" is entered. When the user draws a circle on the key representation "A", an umlauted lowercase [*sic*] letter "a" is entered; when the user draws a triangle, an umlauted uppercase [*sic*] letter "A" is entered.

As seen from the foregoing excerpt from Sano, Sano relies upon special symbols to distinguish between upper- and lower-case letters. It is a complete hindsight reconstruction to say that the use of special symbols suggests to one of ordinary skill in the art the use of a common corner to distinguish between upper- and lower-case letters. Further, because none of Comerford et al., Zadesky et al., or Sano rely upon a sequence of corner hits, it is merely speculation on the part of the examiner that use of a common corner could be used to distinguish between upper- and lower-case letters.

Discussion of the Rejections of the Dependent Claims

In paragraph 11 of the Office action, claims 13, 29, and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. (U.S. 5,303,312) in combination with Zadesky et al. (U.S. 2003/0076306) and further in view of Hildebrand (U.S. 2003/0234766). The shortcomings of the primary references to Comerford et al. and Zadesky et al. are discussed

above. Hildebrand does not address the shortcomings of the primary references nor does it teach "varying the size of the corner areas while said sequence of corner hits is determined" as recited in claims 13, 29, and 50. Paragraph [0129] cited by the examiner reads as follows:

> [0129] Another algorithm that may be used involves having the cursor driver logic receive an input from the finger controllable mechanism indicating a direction that the user wishes for the cursor to move, the input also having a magnitude. In this regard, the input may be viewed as being a vector with both a direction and a magnitude. When the cursor driver logic determines that the vector has more than a predetermined magnitude in a particular direction (e.g., movement of a finger a sufficient length on a touch pad or bending of a cursor nub a sufficient amount and/or for a sufficient period of time), cursor driver logic concludes that the next key in a direction corresponding to the vector has been selected. Different magnitude thresholds may be used to adjust the sensitivity of the finger controllable mechanism and the cursor driver logic. The thresholds may optionally be user adjustable to accommodate different users (e.g., different users may want shorter or longer finger movements on a touch pad to correspond to different key movements). The thresholds may optionally be adjusted by the device itself where the device includes logic which learns from the user his or her style of usage. The thresholds may also optionally be adjusted by the device depending on how the device is being used. For example, when a word processing program is used, a first threshold is employed and when the person is on the phone, a second threshold is employed. (emphases added).

This paragraph, on its face, describes how the movement of a finger across a touch sensitive pad or pressure on a nub can be translated into the selection of a next key. This paragraph says nothing about corners or changing the size of corner areas. Nor does the paragraph mention "dynamically varying" sensitivity based on usage. The algorithm "learns" based on usage, but that is not the same thing as changing the threshold while the touch pad or nub are being operated. It is respectfully submitted that using a vector representative of finger motion on a touch pad or pressure on a nub to select a next key in no way suggests "varying the size of the corner areas while said sequence of corner hits is determined" as recited in claims 13, 29, and 50. The rejection of claims 13, 29, and 50 should be withdrawn.

In paragraph 12 of the Office action, claims 14-16, 30-32, and 51-53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. (U.S. 5,303,312) in combination with Zadesky et al. (U.S. 2003/0076306) and Hildebrand (U.S. 2003/0234766), and further in view of Dimond (U.S. 3,108,254). The shortcomings of the combination of Comerford et al., Zadesky et al., and Hildebrand are set forth above. The addition of Dimond does not address the shortcomings discussed above. Furthermore, while figures 12 and 13 of Dimond may illustrate segments (not corners) of differing shapes, there is no citation by the examiner of Dimond's changing the sizes of the segments. Hildebrand is the only reference cited by the examiner for a teaching or suggestion of "varying the size of the corner areas while said sequence of corner hits is determined," and as demonstrated above, Hildebrand has no such teaching or suggestion. The rejection of claims 14-16, 3-32, and 51-53 should be withdrawn.

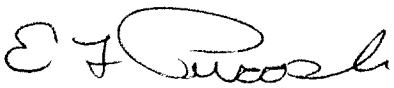
In paragraph 14 of the Office action, claim 66 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. (U.S. 5,303,312) in combination with Zadesky et al. (U.S. 2003/0076306) and Sano (U.S. 5,832,113) and further in view of Hildebrand (U.S. 2003/0234766). This rejection is similar to the rejection in paragraph 11 of the Office action. The rejection of claim 66 fails for the reasons discussed above because Hildebrand at paragraph [0129] does not teach or suggest "varying the size of the corner areas while said sequence of corner hits is determined."

In paragraph 15 of the Office action, claims 67-69 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Comerford et al. (U.S. 5,303,312) in combination with Zadesky et al. (U.S. 2003/0076306) and Sano (U.S. 5,832,113) and further in view of Hildebrand (U.S. 2003/0234766) and Dimond (U.S. 3,108,254). This rejection is similar to the rejection in paragraph 12 of the Office action. The rejection of claims 67-69 fails for the reasons discussed above because the addition of Dimond does not address the shortcomings discussed above. Furthermore, while figures 12 and 13 may illustrate segments (not corners) of differing shapes, there is no citation by the examiner of changing the sizes of the segments. Hildebrand is the only reference cited by the examiner for a teaching or suggestions of "varying the size of the corner areas while said sequence of corner hits is determined," and as demonstrated above, Hildebrand has no such teaching or suggestion. The rejection of claims 67-69 should be withdrawn.

Applicants at this time choose not to present arguments in favor of the patentability of the other dependent claims not addressed above. Applicants' silence with respect to those claims should not be viewed as acquiescence in the Office's position. Applicants reserve the right to present arguments in favor of the patentability of any of the dependent claims at a later date should that become necessary.

Applicants have made a diligent effort to place the instant application in condition for allowance. Accordingly, a Notice of Allowance for pending claims 1-17, 20-36, and 38-71 is respectfully requested.

Respectfully submitted,



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